

IN THE CLAIMS:

Claims 1-7 (withdrawn)

Claim 8 (Currently Amended): A method of manufacturing a semiconductor device, comprising:

forming a first doped lattice matching layer over a doped substrate;

creating a doped buried layer over the first doped lattice matching layer;

producing a second doped lattice matching layer over the doped buried layer, the first and second doped lattice matching layers each having a dopant concentration less than a dopant concentration of the doped buried layer; and

placing a doped epitaxial layer over the second doped lattice matching layer.

Claim 9 (Canceled)

Claim 10 (Currently amended): The method as recited in Claim [9] 8 wherein a dopant concentration of the doped substrate is less than the dopant concentration of the first doped lattice matching layer and a dopant concentration of the doped epitaxial layer is less than the dopant concentration of the second doped lattice matching layer.

Claim 11 (Currently amended): The method as recited in Claim [9] 8 further including forming a third doped lattice matching layer between the first doped lattice matching layer and the

doped buried layer and forming a fourth doped lattice matching layer ~~between~~ over the second doped lattice matching layer ~~and the doped buried layer~~.

Claim12 (Currently amended): The method as recited in Claim 11 wherein a dopant concentration of the third doped lattice matching layer is greater than the dopant concentration of the first doped lattice matching layer and a dopant concentration of the fourth doped lattice matching layer is ~~greater~~ less than the dopant concentration of the ~~fourth~~ second doped lattice matching layer.

Claim 13 (Original): The method as recited in Claim 10 wherein the dopant concentration of the doped substrate ranges from about $1\text{E}14$ atoms/cm³ to about $1\text{E}15$ atoms/cm³, the dopant concentration of the doped buried layer ranges from about $1\text{E}19$ atoms/cm³ to about $1\text{E}20$ atoms/cm³, and each of the dopant concentrations of the first and second doped lattice matching layers range from about $1\text{E}15$ atoms/cm³ to about $1\text{E}19$ atoms/cm³.

Claim 14 (Original): The method as recited in Claim 8 wherein forming and producing each of the first and second doped lattice matching layers includes forming and producing a dopant gradient wherein a dopant concentration of each of the dopant gradients is greater adjacent the doped buried layer.

Claim15 (Currently amended): The method as recited in Claim 8 wherein the forming, creating, producing, and placing, includes forming, creating, producing, and placing using a chemical vapor deposition process.

Claim 16 (Currently amended): The method as recited in Claim 15 wherein the forming, creating, producing, and placing using a chemical vapor deposition process includes forming, creating, producing, and placing in a single deposition chamber.

Claims 17-40 (withdrawn)